

14. (Amended) A mount for a processor, comprising:
a motherboard;
a single edge connector cartridge processor having a connector;
a receiving slot connected to said motherboard and configured to receive said connector;
guides for guiding said connector into said receiving slot, wherein said processor is
[horizontal] parallel to and displaced from said motherboard after said connector is inserted into
said receiving slot.

REMARKS

Claims 1-18 remain in this application. Claims 12 and 14 have been amended to change "horizontal" to --parallel--. Although the motherboard is often horizontal, the case may be vertically disposed, in which case the motherboard will be also. Thus, the relationship is better expressed in saying that the processor is parallel to, as opposed to perpendicular, to the motherboard as has been common in the past.

In the Office Action the Examiner rejected claims 16 and 17 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,530,620 (Sangveraphunsiri). Claims 1-5 and 8-11 were rejected under 35 U.S.C. §103(a) as being unpatentable over Sangveraphunsiri in view of U.S. Patent No. 5,603,618 (Hayakawa). Claims 6 and 7 were rejected under 35 U.S.C. §103(a) as being unpatentable over Sangveraphunsiri in view of Hayakawa and U.S. Patent No. 5,748,446 (Feightner). Finally, claims 12-15 and 18 were rejected under 35 U.S.C. §103(a) as being unpatentable over Sangveraphunsiri in view of Hayakawa and U.S. Patent No. 5,576,935 (Freer).

Sangveraphunsiri is used by the Examiner to reject Claims 16 and 17 as anticipated. Applicant respectfully traverses this rejection and believes that the Examiner has overlooked a limitation in claim 16. Claim 16 specifically requires insertion into a connector on the motherboard. Sangveraphunsiri, on the other hand, in Figures 21 and 22 illustrate inserting the module into the bay of a disk drive which has a connector therein. Thus, Sangveraphunsiri does not anticipate these claims. When, as shown in Fig. 20, this reference illustrates inserting the

module into a connector on the motherboard, it does so vertically. Thus, it teaches away from the claimed arrangement of a horizontal insertion into a connector on the motherboard.

To reject claims 1-5 and 8-11, the Examiner combines with Sangveraphunsiri, a patent to Hayakawa et al. The Examiner first enumerates the element believed to be present in Sangveraphunsiri. Once again, the Examiner overlooks the limitation that the motherboard connector mounted on the motherboard receives the edge connector of the cartridge. The connector 548' does not receive an edge connector of the cartridge. In fact, the connector illustrated in Sangveraphunsiri is not an edge connector, but a connector with pins. The difference between these two kinds of connectors is not insubstantial when one considers the possibility of bending the pins.

The Examiner recognizes that Sangveraphunsiri lacks a teaching of guide rails and guide slots and a teaching of the motherboard connected to the edge connector in the parallel orientation as claimed. To find this teaching the Examiner turns to Hayakawa et al. Hayakawa et al. illustrates a printer device body 1. Mounted vertically within this device body is a printer control board 1-1. A controller board 2-1 plugs into the printer control board. The controller board, although it contains a CPU 10, is not however a processor cartridge or even a processor board. It is a controller board that includes among other things a CPU. Furthermore, the structure shown and described does not have a case as do the claimed processor cartridge and Sangveraphunsiri. Furthermore, the controller board 2-1 is not parallel to and displaced from the board 1-1. It is, rather, more like an extension thereof.

The Examiner contends that it would have been further obvious to have the processor visible from the exterior side. Applicant submits that if this were so obvious, Sangveraphunsiri would have done so. Should the Examiner maintain this position, Applicant respectfully requests that the Examiner provides support. See MPEP 2144.03. Similarly, with regard to claims 9-11, if the Examiner continues to maintain this rejection, support beyond a bare allegation of obviousness is requested.

With regard to combining these two references, first of all Applicant submits that the Examiner has shown no motivation to combine. At most, one might use the guide rails and guide slots of the secondary reference in the primary reference. However, with regard to the embodiments of Fig. 21 and Fig. 22 of the primary reference, there would be no reason to use a different connector. Hayakawa et al. has no details of the connector. In particular, it does not suggest substituting an edge connector for the pinned connector of Sangveraphunsiri. That reference used an edge connector when inserting perpendicular to the motherboard, but did not do so when inserting parallel to the motherboard. Thus, Applicant submits that claims 1-5 and 8-11 distinguish over this combination.

To reject claims 6 and 7, the Examiner added to these two references, a patent to Feightner. Granted, that the use of a heat sink with a processor is well known. However, particularly with regard to claim 7, Applicant submits that the Examiner has pointed to no teaching in the reference of providing a heat sink on the motherboard and also including the claimed connector for connecting the heat sink to the processor, particularly in combination with the other elements claimed. Again, should the Examiner maintain this rejection, Applicant requests citation of specific art.

To reject claims 12-15 and 18 the Examiner add to the basic references, a patent to Freer et al. For the reasons given above, Applicant does not believe that the basic elements are present as the Examiner contends, using the teachings of the two primary references. Freer et al. adds nothing to these basic references. It discloses a conventional arrangement for inserting peripheral cards into a computer, plugging vertically into the motherboard. A teaching of vertically plugging a processor module into the motherboard was already taught by the primary reference in Fig. 20. Thus adding this teaching would only lead one to the arrangement shown in Fig. 20 of Sangveraphunsiri. The Examiner has pointed to no motivation to do otherwise.

In view of the above, Applicant believes that all claims are in condition for allowance, prompt notice of which is respectfully solicited. If the Examiner believes for any reason that

personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

In view of the above, Applicants believe that all claims remaining in this application are in condition for allowance, prompt notice of which is respectfully solicited.

The Examiner is invited to call the undersigned at (202) 220-4200 to discuss any information concerning this application.

The Office is hereby authorized to charge any additional fees under 37 C.F.R. § 1.16 or § 1.17 or credit any overpayment to Deposit Account No. 11-0600.

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